Founded in 1888 by John M'Fadyean

Contents of
Volume 105
July to November
1991

# Journal of Comparative Pathology

ISSN 0021–9975

Academic Press
Harcourt Brace Jovanovich, Publishers
London San Diego New York
Boston Sydney Tokyo Toronto

© 1991 Academic Press Limited. The appearance of the code at the bottom of the first page of a paper in this journal indicates the copyright owner's consent that copies of the paper may be made for personal or internal use, or for the personal or internal use of specific clients in the U.S.A. This consent is given on the condition, within the U.S.A., that the copier pay the stated per-copy fee through the Copyright Clearance Centre, Inc., 27 Congress Street, Salem, MA 01970, for copying beyond that permitted by Sections 107 or 108 of the U.S. Copyright Law. This consent does not extend to other kinds of copying, such as copying for general distribution, for advertising or promotional purposes, for creating new collective works, for resale or for copying or distributing copies outside the U.S.A.

Printed in Great Britain by Latimer Trend & Company Ltd, Plymouth

# Contents of Volume 105

Vol. 105 No. 1 July 1991

PAGE

**Marco, A. J., Domingo, M., Prats, M., Briones, V., Pumarola, M. and Dominguez, L.,** Pathogenesis of Lymphoid Lesions in Murine Experimental Listeriosis . . . . . 1

**Biolatti, B., Dagnall, G. J. R., Bollo, E., Cornaglia, E., Wilsmore, A. K. and Donn, A.,** The Use of Fluorescein-conjugated Monoclonal Antibodies, Cell Culture and Transmission Electron Microscopy to Detect *Chlamydia psittaci* and Associated Lesions in Experimentally Infected Mice . . . . . 17

**Mwangi, D. M., Hopkins, J. and Luckins, A. G.,** Immunohistology of Lymph Nodes Draining Local Skin Reactions (Chancres) in Sheep Infected with *Trypanosoma congolense* . . . . . 27

**Sanders, A. B., How, S. J., Lloyd, D. H. and Hill, R.,** The Effect of Malnutrition on Vaccination Against *Dermatophilus congolensis* Infection in Ruminants . . . . 37

**Howell, J. McC., Deol, H. S., Dorling, P. R. and Thomas, J. B.,** Experimental Copper and Heliotrope Intoxication in Sheep: Morphological Changes . . . . 49

**Scanziani, E., Caniatti, M., Sen, S., Erba, E., Cairoli, F. and Battocchio, M.,** Flow Cytometric Analysis of Cellular DNA Content in Paraffin Wax-embedded Specimens of Canine Mammary Tumours . . . . . 75

**Brunnert, S. R., Hensley, G. T., Citino, S. B., Herron, A. J. and Altman, N. H.,** Salivary Gland Oncocytes in African Hedgehogs (*Atelerix albiventris*) Mimicking Cytomegalic Inclusion Disease . . . . . 83

**Lloyd, S., Wijesundera, M. K. de S. and Soulsby, E. J. L.,** Intestinal Changes in Puppies Infected with *Toxocara canis* . . . . . 93

Short Papers

**Munro, R.,** Intrahepatic Biliary Cysts in Deer . . . . . 105

**Reid, J. D.,** Calcium Oxalate in Mammalian Thyroids: a Re-evaluation. . . . . 109

**Kornegay, R. W., Morris, J. M., Cho, D. and Lozano-Alarcon, F.,** Pancreatic Adenocarcinoma with Osseous Metaplasia in a Ferret . . . . . 117

PAGE

**Løken, T. and Bjerkås, I.,** Experimental Pestivirus Infections in Pregnant Goats . . 123

**Narita, M., Imada, T. and Haritani, M.,** Immunohistological Demonstration of Spread of Aujeszky's Disease Virus via the Olfactory Pathway in HPCD Pigs . . 141

**Wiedosari, E., Graydon, R. and Copeman, D. B.,** Comparative Pathological Study of Hepatic Changes Induced by *Fasciola gigantica* and *Gigantocotyle explanatum* in Javanese Thin-tailed Sheep . . . . . 147

**Sharma, R. and Woldehiwet, Z.,** Immune Responses of Lambs Experimentally Infected with Bovine Respiratory Syncytial Virus and *Pasteurella haemolytica* . . 157

**Canfield, P. J. and Hartley, W. J.,** Tyzzer's Disease (*Bacillus piliformis*) in Australian Marsupials . . . . . 167

**Martin de las Mulas, J., Vos, J. H., Fernández, A., Carrasco, L., Mozos, E. and Sierra, M. A.,** Caprine Peripheral Neuroblastomas: Structural and Ultrastructural Features, Intermediate Filaments Profile and Neuro-endocrine Characterization. . 175

**Galati, P., Roperto, F., De Vico, G., Restucci, B. and D'Andrea, F.,** Atypical Cilia in the Tracheal Epithelium of Healthy Horses . . . . . 185

**Huang, H.-S., Buxton, D., Burrells, C., Anderson, I. E. and Miller, H. R. P.,** Immune Responses of the Ovine Lymph Node to *Chlamydia psittaci*. A Cellular Study of Popliteal Efferent Lymph . . . . . 191

**Abdelkader, S. V., Gudding, R. and Nordstoga, K.,** Clinical Chemical Constituents in Relation to Liver Amyloidosis in Serum-producing Horses . . . . . 203

**Conboy, G. A., Hayden, D. W. and Stromberg, B. E.,** Hepatic and Pulmonary Pathology of Experimental *Fascioloides magna* Infection in Guinea Pigs . . . . 213

Short Papers

**Finnie, J. W.,** Scanning Electron Microscopy of Ovine Endothelial Cells in vitro Exposed to Tunicamycin . . . . . 225

**Walsh, K. M.,** Renal Hyaline Droplets in Tumour-bearing Female Wistar Rats . . 229

**Naghshineh, R., Sohrabi Hagdoost, I. and Mokhber-Dezfuli, M. R.,** A Retrospective Study of the Incidence of Bovine Neoplasms in Iran . . . . 235

**Kamiya, S., Yamagami, T., Umeda, M., Sugiyama, M. and Daigo, M.,** Lectin Histochemistry of Foamy Cells in Non-nervous Tissues of Feline Sphingomyelinosis 241

PAGE

**Reiland, S., Håglin, L. and Sjöberg, H.-E.,** Experimental Hypophosphataemia in Growing Pigs: Effects on Endochondral Ossification in Comparison to Osteochondrosis . . . . . 247

**Bak, U. B. and Azuma, R.,** Pathology of Infection Caused by *Dermatophilus*-like Organisms in Porcine Tonsils . . . . . 255

**Okada, H., Toyota, N., Harimaya, Y. and Matsukawa, K.,** Immunohistochemical Alterations of C Cells in Sheep Treated with Vitamin D . . . . . 263

**Wargovich, M. J., Satterfield, W., Price R. E., Stephens, L. C. and Coghlan, L.,** Hepatic Pathology of the Colon Carcinogen, Azoxymethane, in Hanford–Moore Miniature Pigs . . . . . 271

**Pumarola, M., Brevik, L., Badiola, J., Vargas, A., Domingo, M. and Ferrer, L.,** Canine Leishmaniasis Associated with Systemic Vasculitis in Two Dogs . . . . 279

**Hamid, M. E., Mohamed, G. E., Abu-Samra, M. T., El-Sanousi, S. M. and Barri, M. E.,** Bovine Farcy: A Clinico-pathological Study of the Disease and its Aetiological Agent . . . . . 287

**Yamasaki, H., Umemura, T., Goryo, M. and Itakura, C.,** Chronic Lesions of Thrombo-embolic Meningo-encephalomyelitis in Calves . . . . . 303

**Okada, H., Fujimoto, Y., Ohshima, K. and Matsukawa, K.,** C Cell Hyperplasia and Carcinoma Developing in Sheep with Experimentally-induced Lymphosarcoma. . 313

**Carthew, P., Dorman, B. M. and Edwards, R. E.,** Increased Susceptibility of Aged Rats to Haemorrhage and Intravascular Hypercoagulation Following Endotoxin Administered in a Generalized Shwartzman Regime . . . . . 323

**Colbatzky, F., Brunnberg, L., Linke, R. P., Geisel, O. and Hermanns, W.,** AA-like Amyloid Deposits Confined to Arthritic Joints in Two Dogs with Rheumatoid Arthritis . . . . . 331

**Carrasco, L., Rodriguez, F., Martin de las Mulas, J., Sierra, M. A., Gómez-Villamandos, J. C. and Fernández, A.,** Pulmonary Intravascular Macrophages in Rabbits Experimentally Infected with Rabbit Haemorrhagic Disease . . . . . 345

**Boujon, C. E., Ritz, U., Rossi, G. L. and Bestetti, G. E.,** A Clinico-pathological Study of Canine Cushing's Disease Caused by a Pituitary Carcinoma . . . . . 353

PAGE

**Blisard, K. S., Harrington, D. A., Long, D. A. and Jackson, J. E.,** Relative Lack of Toxicity of Transplatin Compared with Cisplatin in Rodents . . . . . 367

**Liberski, P. P., Brown, P., Xiao, S.-Y. and Gajdusek, D. C.,** The Ultrastructural Diversity of Scrapie-associated Fibrils Isolated from Experimental Scrapie and Creutzfeldt-Jakob Disease . . . . . 377

**Muñoz-Chápuli, R., García-Garrido, L. and de Andrés, V.,** Coronary Myointimal Lesions in the Dogfish Shark *Scyliorhinus canicula* . . . . . 387

**Dharma, D. M. N., Budiantono, A., Campbell, R. S. F. and Ladds, P. W.,** Studies on Experimental Jembrana Disease in Bali Cattle. III. Pathology . . . . . 397

**Baskerville, A., Ramsay, A. D., Millward-Sadler, G. H., Cook, R. W., Cranage, M. P. and Greenaway, P. J.,** Chronic Pancreatitis and Biliary Fibrosis Associated with Cryptosporidiosis in Simian AIDS . . . . . 415

**O'Brien, R. T., Hendrick, M. J., Evans, S. M. and Brooks, J. J.,** Pathological and Radiographical Features of Multicentric Malignant Fibrous Histiocytoma in Two Dogs . . . . . 423

**Woldehiwet, Z., Carter, S. D. and Dare, C.,** Purification of *Cytoecetes phagocytophila*, the Causative Agent of Tick-Borne Fever, from Infected Ovine Blood . . . . 431

**Narita, M., Imada, T. and Kobayashi, M.,** Pathogenesis of Aujeszky's Disease Virus Infection in Swine Tracheal Organ Culture. . . . . 439

**Reece, R. L.,** Ascites Syndrome in SPF Light Sussex Chickens . . . . . 445

**El-Masannat, E. T. S., Jones, J. E. T. and Scott, M. J.,** The Experimental Production of Mastitis in Sheep by Intramammary Inoculation of *Pasteurella haemolytica* . . 455

Short Papers

**Kamiya, S., Suzuki, Y. and Daigo, M.,** Polyglucosan Bodies in the Central Nervous System of a Fox . . . . . 467

**Roth, L. and Bradley, G. A.,** Pulmonary Hamartoma in a Calf. . . . . 471

# Author index, volume 105


Abdelkader, S. V., 203
Abu-Samra, M. T., 287
Altman, N. H., 83
Anderson, I. E., 191
Azuma, R., 255

Badiola, J., 279
Bak, U. B., 255
Barri, M. E., 287
Baskerville, A., 415
Battocchio, M., 75
Bestetti, G. E., 353
Biolatti, B., 17
Bjerkås, I., 123
Blisard, K. S., 367
Bollo, E., 17
Boujon, C. E., 353
Bradley, G. A., 471
Brevik, L., 279
Briones, V., 1
Brooks, J. J., 423
Brown, P., 377
Brunnberg, L., 331
Brunnert, S. R., 83
Budiantono, A., 397
Burrells, C., 191
Buxton, D., 191

Cairoli, F., 75
Campbell, R. S. F., 397
Canfield, P. J., 167
Caniatti, F., 75
Carrasco, L. 175, 345
Carter, S. D., 431
Carthew, P., 323
Cho, D., 117
Citino, S. B., 83
Colbatzky, F., 331
Conboy, G. A., 213
Cook, R. W., 415
Copeman, D. B., 147
Cornaglia, E., 17
Coughlan, L., 271
Cranage, M. P., 415

Dagnall, G. J. R., 17
Daigo, M., 241, 467
D'Andrea, F., 185
Dare, C., 431
De Andrés, V., 387
Deol, H. S., 49
De Vico, G., 185
Dharma, D. M. N., 397
Domingo, M., 1, 279
Dominguez, L., 1
Donn, A., 17
Dorling, P. R., 49
Dorman, B. M., 323

Edwards, R. E., 323
El-Masannat, E. T. S., 455
El-Sanousi, S. M., 287
Erba, E., 75
Evans, S. M., 423

Fernández, A., 175, 345
Ferrer, L., 279
Finnie, J. W., 225
Fujimoto, Y., 313

Gajdusek, D. C., 377
Galati, P., 185
García-Garrido, I., 387
Geisel, O., 331
Gómez-Villamandos, J. C., 345
Goryo, M., 303
Graydon, R., 147
Gudding, R., 203

Håglin, L., 247
Hamid, M. E., 287
Harimaya, Y., 263
Haritani, M., 141
Harrington, D. A., 367
Hartley, W. J., 167
Hayden, D. W., 213
Hendrick, M. J., 423
Hensley, G. T., 83
Hermanns, W., 331
Herron, A. J., 83

Hill, R., 37
Hopkins, J., 27
How, S. J., 37
Howell, J. McC., 49
Huang, H. S., 191

Imada, T., 141, 439
Itakura, C., 303

Jackson, J. E., 367
Jones, J. E. T., 455

Kamiya, S., 241, 467
Kobayashi, M., 439
Kornegay, R. W., 117

Ladds, P. W., 397
Liberski, P. P., 377
Linke, R. P., 331
Lloyd, D. H., 37
Lloyd, S., 93
Løken, T., 123
Long, D. A., 367
Lozano-Alarcon, F., 117
Luckins, A. G., 27

Marco, A. J., 1
Martin de las Mulas, J., 175, 345
Matsukawa, K., 263, 313
Miller, H. R. P., 191
Millward-Sadler, G. H., 415
Mohamed, G. E., 287
Mokhber-Dezfuli, M. R., 231
Morris, J. M., 117
Mozos, E., 175
Muñoz-Chápuli, R. 387
Munro, R., 105
Mwangi, D. M., 27

Naghshineh, R., 235
Narita, M., 141, 439
Nordstoga, K., 203

O'Brien, R. T., 423
Okada, H., 263, 313
Ohshima, K., 313

Prats, M., 1
Price, R. E., 271
Pumarola, M., 1, 279

Ramsay, A. D., 415
Reece, R. L., 445
Reid, J. D., 109
Reiland, S., 247
Restucci, B., 185
Ritz, U., 353
Rodriguez, F., 345
Roperto, F., 185
Rossi, G. L., 353
Roth, L., 471

Sanders, A. B., 37
Satterfield, W., 271
Scanziani, E., 75
Scott, M. J., 455
Sen, S., 75
Sharma, R., 157
Sierra, M. A., 175, 345
Sjöberg, H.-E., 247
Sohrabi Hagdoost, I., 235
Soulsby, E. J. L., 93
Stephens, L. C., 271
Stromberg, B. E., 213
Sugiyama, M., 241
Suzuki, Y., 457

Thomas, J. B., 49
Toyota, N., 263

Umeda, M., 241
Umemura, T., 303

Vargas, A., 279
Vos, J. H., 175

Walsh, K. M., 229
Wargovich, M. J., 271
Wiedosari, E., 147
Wijesundera, M. K. de S., 93
Wilsmore, A. K., 17
Woldehiwet, Z., 157, 431

Xiao, S.-Y., 377

Yamagami, T., 241
Yamasaki, H., 303

# Subject index, volume 105


ADENOCARCINOMA, 117
Amyloidosis, 203, 331
Ascites syndrome, 445
*Atelerix albiventris*, 83
Aujesky's disease virus, 141, 439
Azoxymethane, 271

*BACILLUS piliformis*, 105
Bali, 397
Biliary cysts, 105
Biliary fibrosis, 415

CALCIUM oxalate, 109
Carcinoma, 313, 353
Cat, 109, 241
Cattle, 109, 235, 287, 303, 397, 471
C-cells, 263, 313
Cell culture, 17
Cellular DNA, 75
Central nervous system, 467
Chancres, 27
*Chlamydia psittaci*, 17, 191
Cilia, 185
Cisplatin, 367
Clinical chemistry, 203
Clinical pathology, 353
Colon, 271
Copper, 49
Coronary lesions, 387
Creutzfeldt-Jakob disease, 377
Cryptosporidiosis, 415
Cushing disease, 353
*Cytoecetes phagocytophila*, 431
Cytomelagic inclusion disease, 83

DEER, 105
*Dermatophilus congolense*, 37
Dermatophilus-like organism, 255
Dogfish shark, 387
Dogs, 75, 93, 109, 279, 313, 353, 423

ELECTRON microscopy, 17, 49, 83, 175, 367, 377
Endochrondral ossification, 247
Endothelial cells, 225
Endotoxin, 323

FARCY, 187
*Fasciola gigantica*, 147
Ferret, 117
Flow cytometry, 75
Fluorescein-conjugated monoclonal antibodies, 17
Foamy cells, 241
Fox, 467

*GIGANTOCOTYLE explanatum*, 147
Goats, 123, 175
Guinea pig, 213

HAMARTOMA, 471
Heart, 387
Hedgehog, 83
Heliotrope, 49
Histochemistry, 241
Histopathology, 1, 83, 93, 105, 109, 117, 147, 175, 185, 213, 229, 235, 241, 247, 255, 271, 279, 303, 331, 345, 353, 367, 387, 397, 415, 423, 439, 467, 471
Horse, 109, 185, 203
Hyaline droplets, 229
Hypophosphataemia, 247

IMMUNE response, 157, 191
Immunohistology, 27, 93, 141, 263
Infection, 17, 37, 123, 157, 255, 455
Intermediate filaments, 175
Intestine, 93
Intravascular hypercoagulation, 323
Iran, 235

JAVANESE thin-tailed sheep, 147
Jembrana disease, 397

KIDNEY, 17, 229

LECTIN histochemistry, 241
Leishmaniasis, 279
Listeriosis, 1
Liver, 105, 147, 203, 213, 271
Lung, 213, 471

Lymph nodes, 27, 191
Lymphoid lesions, 1
Lymphosarcoma, 313

MACROPHAGES, 345
Malnutrition, 37
Mammary gland, 75, 455
Marsupials, 167
Mastitis, 455
Metaplasia, 117
Mouse, 1, 17

NEOPLASIA, 75, 117, 229, 235, 271, 313, 353, 423
Neuroblastoma, 175

OLFACTORY pathway, 141
Oncocytes, 83
Osteochondrosis, 247

PANCREATITIS, 415
*Pasteurella haemolytica*, 157, 455
Pathogenesis, 1, 439
Pestivirus, 123
Pigs, 141, 247, 255, 271, 439
Pituitary carcinoma, 353
Poisoning, 49, 271, 367
Polyglucosan bodies, 467
Poultry, 445
Primates, 109, 415
Pulmonary macrophages, 345
Purification, 431

RABBIT haemorrhagic disease, 345
Rabbits, 345
Radiography, 423
Rats, 229, 323, 367
Respiratory syncytial virus, 157
Rheumatoid arthritis, 331

SALIVARY gland, 83
Scrapie, 377
Scrapie-associated fibrils, 377
*Scliorhinus canicula*, 387
Serum producing horses, 203
Sheep, 27, 37, 49, 147, 157, 191, 225, 263, 313, 431, 455
Simian AIDS, 415

THROMBO-embolic meningo-encephalitis, 303
Tick-borne fever, 431
Tonsil, 255
Toxicology, 49, 271, 367
*Toxocara canis*, 93
Tracheal epithelium, 185
Tracheal organ culture, 439
Transplatin, 367
*Trypanosoma congolense*, 27
Tunicamycin, 225
Tyzzer disease, 167

ULTRASTRUCTURE, 17, 49, 83, 175, 225, 367, 377

VACCINATION, 37
Vasculitis, 279
Virus, 123, 141, 157
Vitamin D, 263